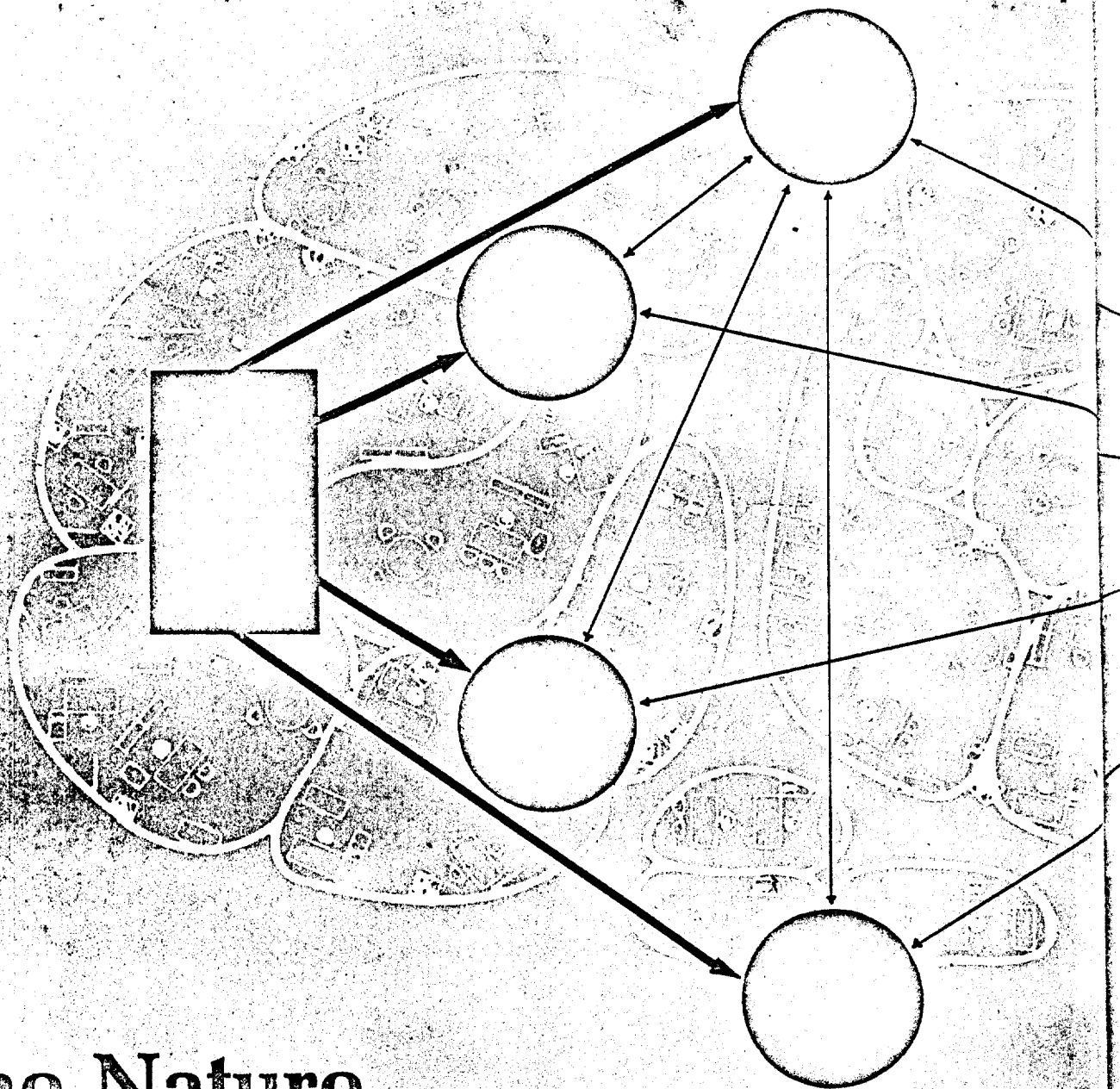


file Space Planning



The Nature

of

OFFICE

LANDSCAPING

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Process, say the office landscapers, is the thing and by "process" they mean two processes — the process of planning an office (data-gathering, data-analyzing) and the ideal work process of the office itself. The curvilinear and chaotic-appearing environments which result do so by the dictates of these processes, they say. Landscaping is presented as a system; thus none of its components is expendable. Controversial though it may be, landscaping nonetheless presents an alternative to the geometric monotony of closed planning's rigidly ordered cubicles and open planning's usual regimentation of office furniture. But that isn't what it's about; it's about process, and architects, the author submits, need to have an understanding of this process.

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BY JOHN F. PILE

and triangles, office landscaping's appears to be chaotic. regimentation of space planning, illy logical and

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and efficient, n being truly the organiza-

programmatic caping are so est major new

tion. Every architect, office planner and interior designer coming into contact with an office project should be knowledgeable about the landscaping approach and should form opinions on its applicability to various situations.

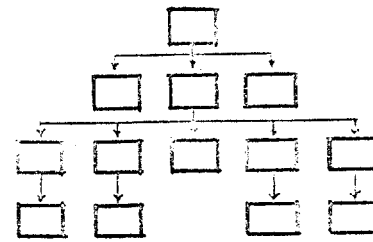
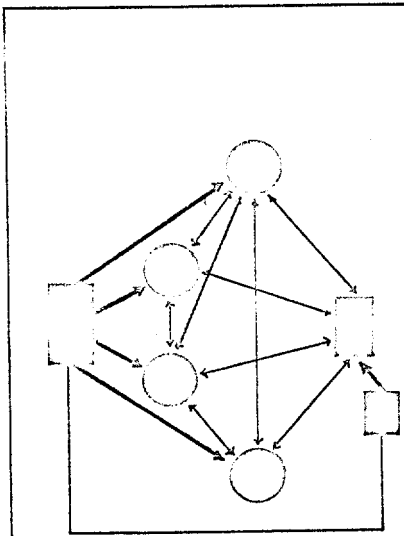
Efforts toward familiarization should be discerning, however. The publications, conferences and seminars concerned with space planning, after years of having nothing to discuss, seized on landscaping as the most interesting and most controversial development in sight and have produced a flood of written and spoken commentary in which opinions—pro, con and noncommittal, but nearly always based on shaky knowledge—are usually voiced in support of a position in which the commentator has a vested interest.

or interior designers but management consultants—with the odd name of Quickborner Team (after the Hamburg suburb, Quickborn, where its office is located) began to look into the problems of office planning for several European corporations. A group of ideas evolved through successive projects which gave rise to highly unusual spaces.

The geometry-disdaining appearance of such offices, together with the use of many green plants, led to the name "Bürolandschaft" which translates literally to "office landscape."

Beneath the surface appearance, however, are some ideas which are far from frivolous. Closely interrelated, these ideas, their originators say, must always be used together and in full and should never be applied to offices having fewer than 80-100 employees in one location. They compose a system and they are as follows:

1. Planning must begin with a detailed analysis of the actual patterns of communication whether written, telephoned or spoken. This communications analysis replaces organizational charts, departmental structures or other conventional criteria and becomes the basis of the critical analysis that is the heart of the landscape process.
2. Planning is largely a matter of making as short and as effective as possible those lines of communication which are the most used,



QUICKBORNER QUICK VIEW:

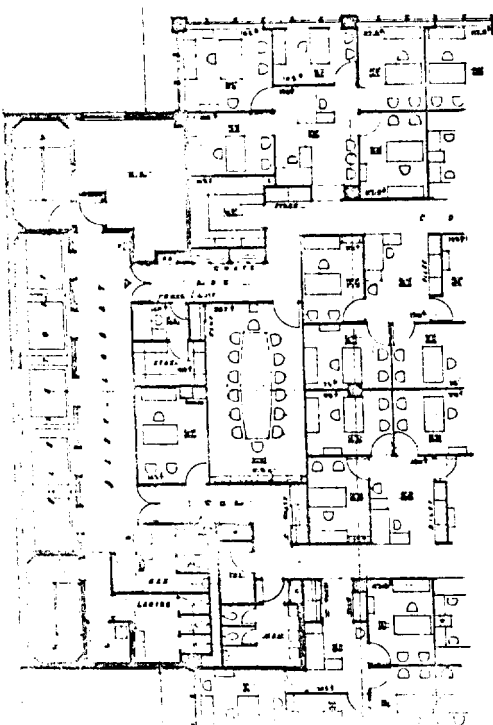
Quickborner puts equal weight on four interrelated factors and emphasizes education of members of the "socio-technical system" to ensure faithful application of its

so that people who work together closely end up in close proximity regardless of their rank or departmental status. Computer-aided techniques can be used to aid the planning process for larger organizations and they are easy to use because of the simplicity of the criteria involved.

3. There are no partitioned private offices. Even for top executives, light, moveable screens control lines of vision and establish personal and group work areas.

4. Geometric layout is avoided to make adaptation to the operations-based ideal plan easier, to promote flexibility and to avoid the grimly regimented appearance that might result in the large open spaces involved.

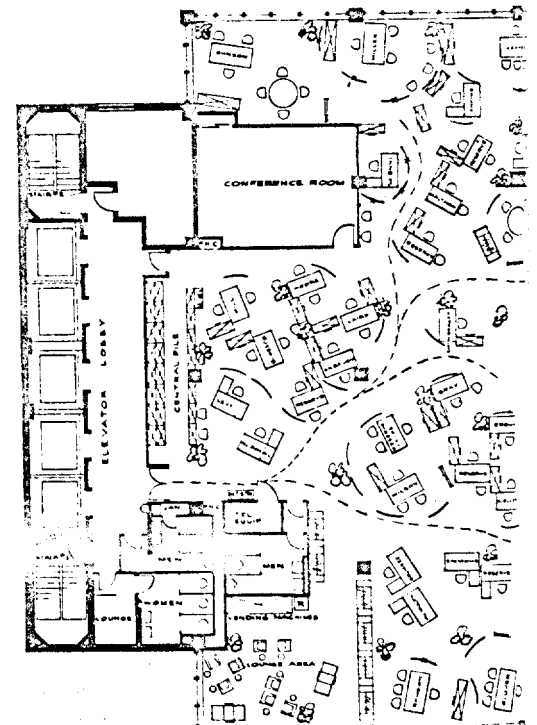
5. To cope with the acoustical problems, carpeting is used throughout, ceilings are equipped with an acoustical baffle system, reflecting surfaces are avoided (glass perimeter walls are limited or curtained) and furniture with large vertical

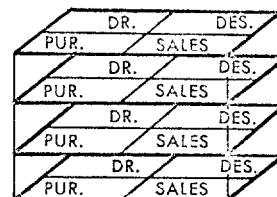
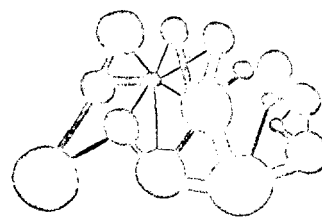


DU PONT CONTINUES LANDSCAPING TEST

In Wilmington, Delaware, the Du Pont Company continues to experiment with a single installation for a marketing management operation formerly quartered according to the plan at left. Audio and visual privacy deficiencies remain an unsolved problem in the test setting which has most of the office landscape characteristics. But P. G. Twitchell, manager of the industrial section of the company's general service department, is convinced office landscaping has a useful role to play, especially in "high teamwork" activities. Du Pont, reportedly the first United States company to try landscaping, is considering the approach in its planning for a new office building.

If we are seriously interested in this





The announced benefits of landscaping are improved work performance resulting from improved communications and work relationships; improved morale; greatly improved flexibility for organizational changes rendering replanning easy and thus encouraging the actual making of such changes; and — quite incidentally but of great interest — markedly reduced costs in initial construction and,

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over extended time, even greater cost reductions because of the ease of making changes.

The sources of initial cost reductions are largely in the elimination of partitioning but to some degree are also in floor area savings. The latter usually results from the compacting of work stations in nongeometric open planning.

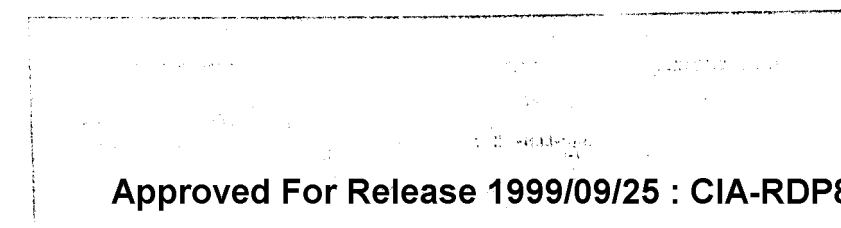
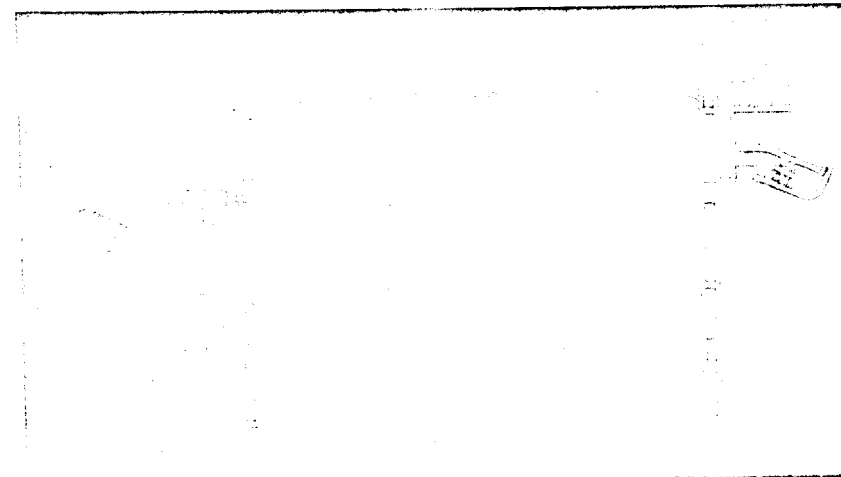
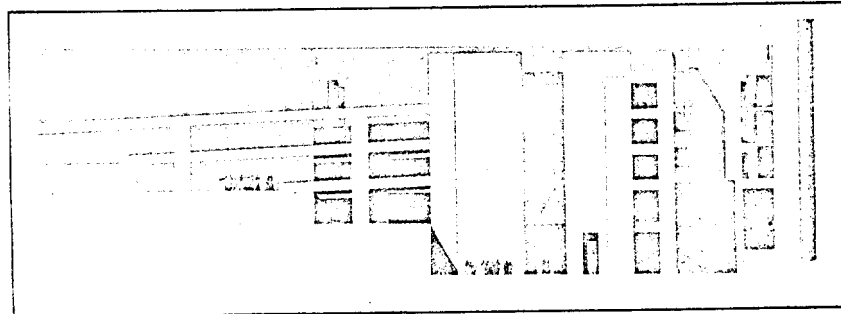
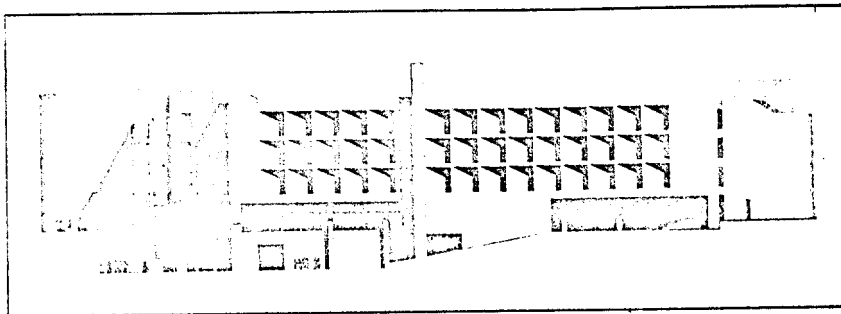
It can be argued that landscaping pre-empts the architect, designer and planner, replacing such professionals with computer-armed business consultants. There have

been similar "usurptions" in hospital planning and other areas where specialized functional planning has become something of the province of experts outside the design professions.

The office landscapers seem to take the position that designers have the design responsibility for the office but their design programs should be the basic programs resulting from the operations analyses. Indeed, when the nature of landscaping is clearly understood, architects may find it no more con-

straining than any other set of client requirements. Moreover, the lucidity with which landscape requirements are presented can make it easier for the architect to perform his role.

Landscapers discover the significant patterns of communication through direct, empirical research. Done over a period of several weeks, this research elicits the actual communication pattern within a given organization. This generates basic data about real work patterns—"real" as opposed to



TWO REFLECTIONS OF LANDSCAPING

Architectural programs rooted in landscape requirements must meet numerous design standards to accommodate the system. For the Ginn & Company Office Building in Lexington, Massachusetts, left, the work of Boston architects Anderson Beckwith & Haible, these standards numbered 49. This building and Purdue University's Administrative Services Building, right, in Lafayette, Indiana, show the special spaces of office landscaping pulled out from the main body along with those for services and vertical circulation. The building at Purdue, by the architectural firm of Walter Scholer & Associates, accomplishes this within what reads essentially as a common enclosure. In the Ginn building, the loft space is accentuated by the sculpted expression of the special/service spaces at its extremities. Some of the design standards shared by the two projects are: 1) The office areas should be divided by as few permanent walls as possible. Large flexible areas allow free-form furniture arrangement which correspond to organizational and communication patterns. 2) The arrangement of columns should not divide the office area nor hinder the free arrangement of working places. There should be no less than 25 feet between columns. 3) The office area should be planned independently of facade and natural light. To achieve this, the depth of office areas should be 100 feet or more between fixed walls. 4) A service module providing electricity and telephone service should be provided throughout the office area on approximately a 6-foot grid. 5) All stairways, elevators, installations, toilets, washrooms and vestibules to them are to be located at the ends of the office area. 6) One core should serve from 100 to 125 employees.

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those which are thought to exist — necessary for the development of patterns which should exist.

This kind of data can be gathered and reported only with suitable forms. Often used in organizing such information are "mileage" charts in which a numerical value expressive of the density of communication between any two persons is entered at the point in the chart where their respective columns intersect. In the case of a complex organization, such charts express relationships between indi-

viduals in small groups as well as the work relationships between the groups themselves.

The numerical data in the mileage charts of a large organization, though it might well overwhelm the planner, becomes more manageable when placed in the lap of electronic data processing.

Faced with the problem of minimizing the length of dense communication lines, a planner can devise a graphic portrayal of density and then through trial and error seek to find the best plan.

For jobs so complex as to defy any planner's skill and patience, the computer — the undisputed champion of trial and error exercise — can try every possible permutation of physical arrangement while computing a total of density x distance factors for every combination in order to locate the optimum plan which then becomes subject to qualitative adjustments.

Such sophisticated planning should not, obviously, be negated in any way by the building that encloses the office operation. Floor spaces should be planned according to the disclosures of the critical analysis. As a general principle, they should be as large as possible and unbroken by walls, circulation cores, service installations, etc., with services in external towers or in corners.

Partitions should be avoided. Visual barriers, acoustical controls, privacy to the degree necessary and definition of particular work group areas can be obtained through the use of lightweight, movable screens and living plants. Screens can be arranged so as to blot out extraneous distractions while providing visual communication with other members of the activity with which the staff member is associated. "Visual fields" can be created for managers.

Lounge areas available at any time to all staff members are created for their relaxation. Available to personnel at any time, they must be large, comfortably furnished and equipped with refreshment facilities. Here again the reality of office life is recognized; workers will take breaks anyway and the provision of a "break space" makes the rest period more beneficial. It also discourages the weary workers from disturbing colleagues who may be very much in harness.

Geometric arrangements of furniture and aisles encroach upon functional need. Free patterns better fit the real lines of work relationships. They also pose an alternative to cubicle cloisters and open planning's frequent vistas of grim regimentation. This approach happens to outrage many of the planners who for so many years have dedicated themselves to getting things into visual order.

Adapting landscaping to the rectangularity of most buildings is not a significant problem. Moreover, landscape plans often use straight lines when these work well, as in draft-

Security
Privacy
Requirements?

Architecture, meanwhile, is testing departures from the dominating rectangle, and any breakaway paths discovered might well parallel what is happening in offices today.

Routine work is becoming truly mechanized, and the staff member, no longer a mere cog in a machine, is becoming a thinker, a creator and a decision maker. His individuality grows more important and his need for human, face-to-face communications more necessary. Everyone is an executive — and in landscaped offices everyone shares space of considerable luxury with a minimum of rank distinctions. Thus landscaping expresses an emerging reality.

There are objections to landscaping, and perhaps the most often voiced comes from top executives who tend to see it as a subversive effort to torpedo their prestigious private offices. On the other hand, it can be noted that the better restaurants are often the scene of the most confidential and far-reaching business discussions. No sound-proof cubicle there! Moreover, and more seriously, a degree of sound control can be achieved through landscaping's techniques.

Are landscaping's claims being tested? Yes, and probably the most careful of the studies of this planning approach is underway. Its first-phase findings on those aspects which are subject to tangible evaluation are contained in "Office Landscape/A Feasibility Study," conducted and published by Brooks, Farr, Graeber & White, and Pitts, McBane, Phelps & White, Associated Architects and Engineers, under sponsorship of the Public Buildings Services Administration and the US Department of Labor. This 44-page, illustrated booklet reports on a study conducted to evaluate the appropriateness of using office landscape concepts for a Department of Labor office building under construction in Washington, D. C.

The Quickborner Team was retained as consultants for this study, but the facts were marshaled by the architects and engineers who appear to take responsibility for the report's impartiality. The study is of great significance because of its pertinence to almost any large American office building (the Labor building will house 6,000 personnel) in which landscape planning might be considered.

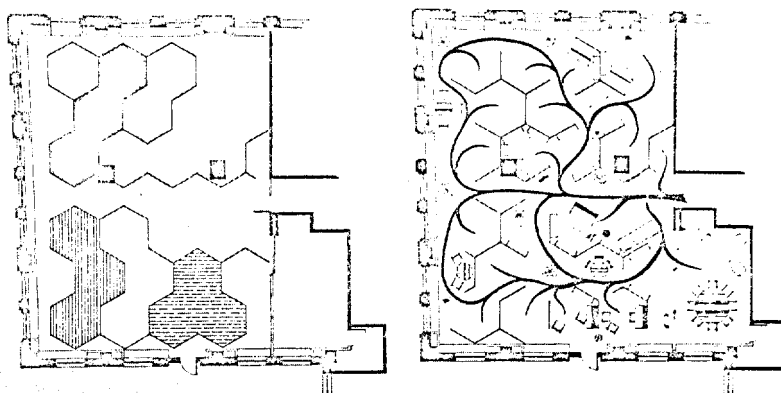
A detailed comparison is made

between conventional and land-

scape requirements for lighting, airconditioning, furniture selection and filing practices. Also included is a complete comparison study of the standards for work space allocations of the General Services Administration, Labor Department and the Quickborner Team. A small, typical area of floor space including a range of situations was chosen and planned out in detail in both conventional and landscape approaches. The results of this small unit comparison are

then used by extension to give comparative data for the huge, five-level building.

The conclusions appear to be heavily favorable to the landscape method — more favorable, in fact, than the report chooses to emphasize. Each conclusion as to a particular aspect of comparison is stated separately; their cumulative force is never added up in one place. These are the conclusions: 1. The nonpartitioned landscape plans would permit a reduction in



the building's mechanical systems. GSA and Labor, however, stipulated the installation of a mechanical system adequate to a conventional plan in order to keep options open. So the saving, since it is not to be realized, is left unpriced — but it would have been "large," the report says simply.

2. There is a gain in floor area occupancy of about 10 percent throughout the entire building even after certain areas not subject to landscaping are deducted. Besides

lobbies, data processing centers, etc., these areas include top executive locations. This is contrary to one of the principal tenets of the landscape approach. Exempting a certain executive class from open space occupancy seems to establish a status line more marked and odious than under conventional practice.

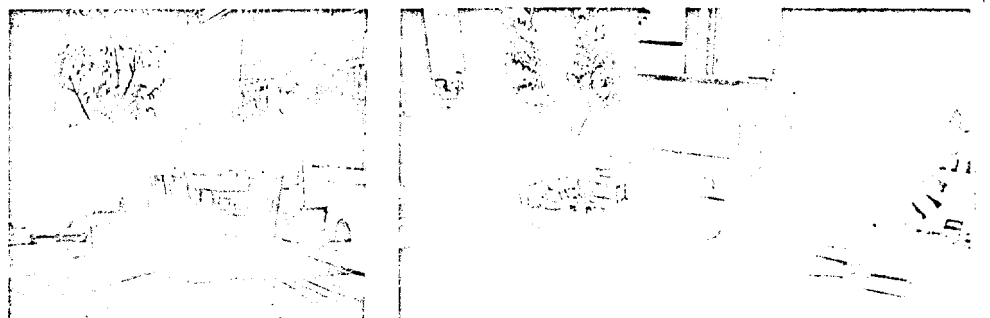
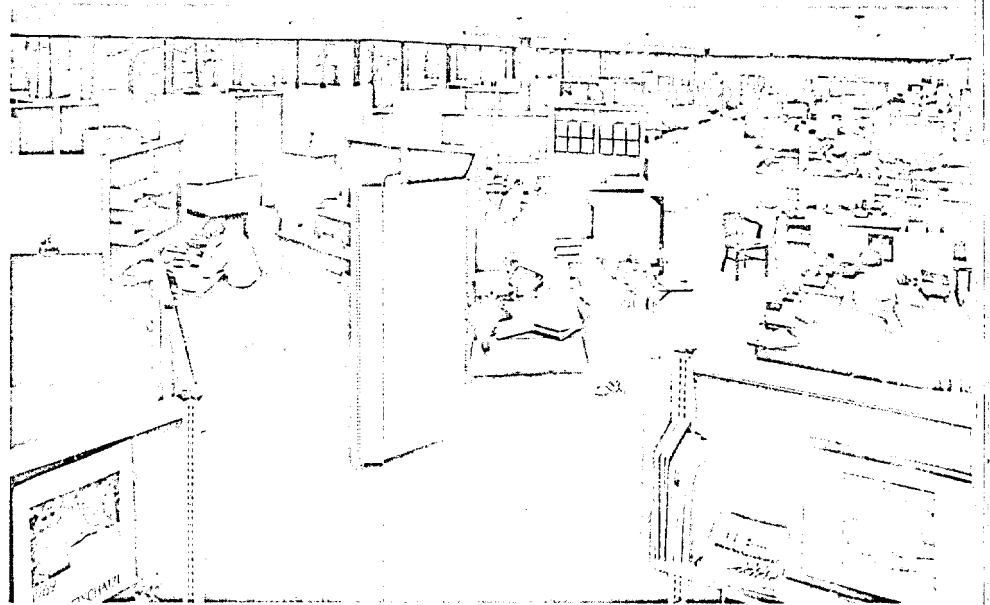
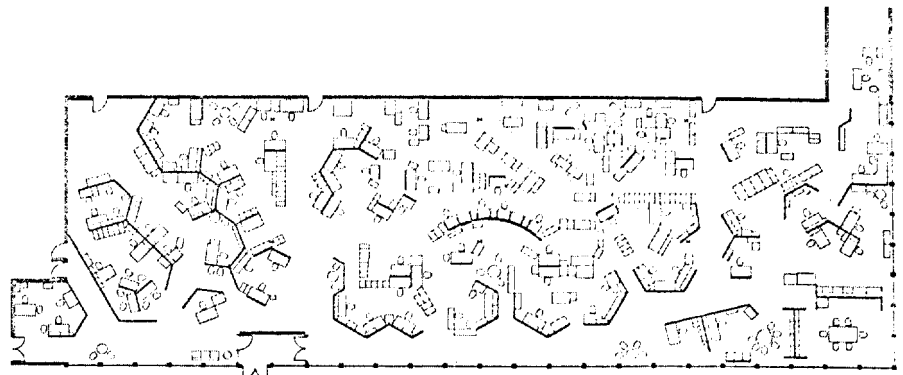
Also, it means that the gain in space utilization throughout the building would have been greater if it were not for this exclusion.

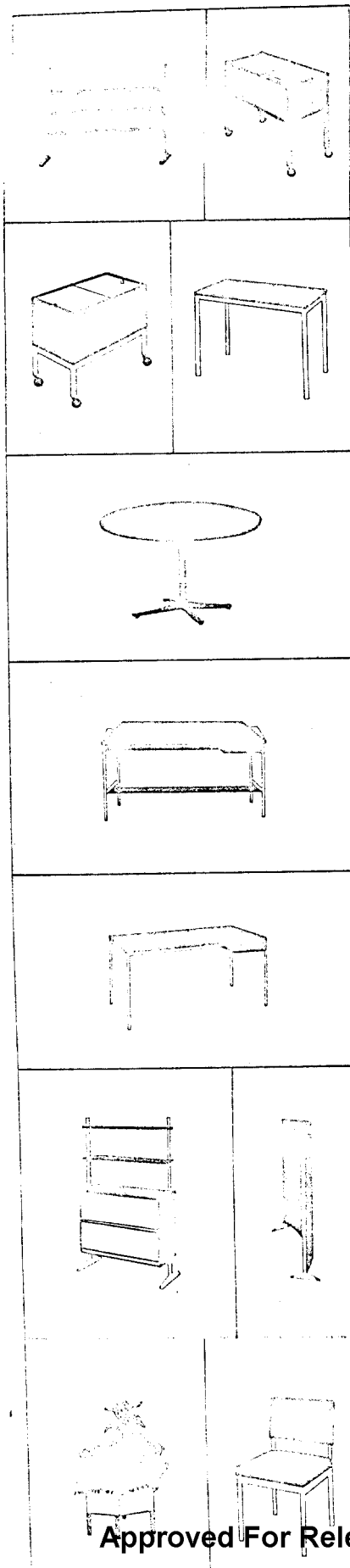
The gain can, of course, be taken either through reduction of the size of the building planned or, as in this instance, as a dollar figure representing the cost of rental or newly constructed space of the area saved. No matter how it is seen, it represents an approximate 10 percent saving in first cost and in all continuing expenses for the life of the building.

3. The square foot cost of the conventional installation works out to \$4.18, and for the landscape plan,

AMONG VARIATIONS AND DEPARTURES

The office at left was planned by JFN Associates, Inc., a space planning firm, for its own branch in Chicago. It is said to be the first use of Herman Miller's Action Office II system other than in Herman Miller's own offices in Zeeland and Grand Rapids, Michigan. A 5-foot hexagonal grid was used for the 3,000-square-foot office that is devoid of straight-line corridors. A JFN statement explains that executives of both the firm and Herman Miller "prefer the phrase 'open plan' rather than 'office landscape,'" and adds that the use of a hexagonal grid "makes it an altogether different thing from the seemingly random arrangements of work stations in Bürolandschaft offices seen here and abroad." Panels do more than define space; they hold furniture which can be changed or adjusted according to individual or program needs. The stations themselves can be changed — made larger or smaller or new spaces created — within the grid system. For Rhode Island's B. A. Ballou Company, right, the Research and Design Institute of Providence, which did both the building and the interior planning, produced a solution that, while clearly recognizing work flow patterns, tries first to enhance the involvement and interpersonal relationships of staff. If in the design of an office or anything else, says Ronald Beckman, REDE's director, you begin with the concept of human behavior, "you end with what is truthful and varied and what may even become recognized as beautiful." It can be demonstrated, he adds, that "efficiency is a function of motivation and that motivation is a function of identity on the part of the performer." So REDE, views of whose own factory loft offices appear at lower right, addresses a problem in primarily human, motivational





\$3.47. This is a saving of 17 percent and although this report does not mention it we can note that this saving pyramids on to the area saving cited previously. Taken together, a saving of 25 percent can be projected (the percentages are not to be simply added; they are to be deducted in sequence).

4. The comparison of the costs of annual maintenance works out to the advantage of the landscaped installation by 3.9 cents per square foot. This cannot be converted to a percentage since no total maintenance figure has been estimated.

5. Replacement costs comparisons generate a result favorable to the landscape plan by 2.7 cents per square foot if carpeting is replaced in a 10-year cycle. If a five-year cycle is assumed this figure becomes favorable to conventional planning by 5.9 cents per square foot. Combining this estimate with the maintenance figure previously given, we find either an advantage of 6.6 cents per square foot to landscape planning, or a disadvantage of 2.0 cents, depending solely on the frequency of carpet replacement.

There is no attempt to estimate savings which might result from the lower cost of making layout changes in spite of the weight of this cost factor. Intangible benefits of the landscape plan are discussed guardedly and without offering any firm conclusions.

A byproduct of the ferment about office landscaping has been a sudden burst of new thinking about office furniture, a field in which uniformity among various manufacturers had become almost total. Landscape planning theory demands office furniture that is "transparent" to vision and to sound. This means tables with few drawers and open file baskets in place of conventional desks, and open-topped file bins or carts in place of conventional cabinets.

Furniture manufacturers are responding to this new set of requirements in either of two ways (and sometimes in both). There are several new product groups that attempt to supply the requirements of landscape planning quite exactly according to the specifications of its developers. At least one other group (and more are in the development stage) respond to the pressure of the landscape idea with an alternative which recognizes some landscape ideas without following the

ction Office II group produced by

Herman Miller in the designs of that firm's research director, Robert Propst. It is provided with a full apologia in the form of a book (*The Office — A Facility Based on Change*, by Propst, Business Press, 1968). The book undertakes a broad re-evaluation of office work functions with the individual worker (seen primarily as a middle-management executive) as the basic focus, and proceeds to the development of highly flexible equipment (an extension of the original Herman Miller Action Office) to serve widely varied requirements. It suggests that this equipment can be arranged in free groupings, such as those of office landscaping's, although landscaping as such is never mentioned. Such mention, in fact — and rather amusingly in view of the author's wide scope of interests — is scrupulously avoided.

Quite aside from the value of the products which it introduces, this is a book of considerable interest, but it is marred by a tendency to use the artificial language and style of a think-tank in its leaning toward portentous-sounding words and phrases of unclear and possibly nonexistent meaning.

Whatever quibbles one may have with the verbal justifications offered for this furniture, it must be admitted that the group is another lively and interesting departure from the dullness which was the norm of all office equipment until a few years ago. Office planning has come alive and we can expect a period of change, confusion and development. Every project involving office space must take account of the new ideas afoot and must entail decisions as to what directions will prove to be sound and meaningful over the anticipated life of an installation.

Meanwhile, remaining as the most comprehensive reference on what office landscaping is all about is *Flexible Verwaltungsbauten* (second, revised and extended edition, by Ottomar Gottschalk, Verlag Schnelle, Quickborn). This 287-page, fully illustrated book replaces a smaller and somewhat tentative work by the same author, one of the originators of landscaping, published in 1963. It is a handsomely designed, thoroughly detailed manual which, unfortunately, is in German. A high school-level understanding of German, however, suffices to extract the data of interest. One of the alternative lines of thought is illustrated by the "Office

ness of this one.